

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1. (Currently Amended) A nucleic acid molecule comprising a sequence of nucleotides that encodes a CEA fusion protein, wherein the CEA fusion protein comprises a CEA protein or variant thereof, fused to a substantial portion of subunit B of heat labile enterotoxin of *E. coli* an immunoenhancing element selected from the group consisting of ~~DOM, Fc_εG, CT, LTA, and (LTB)~~; and wherein the fusion protein is capable of producing an immune response in a mammal.

Claim 2 (Previously Presented) The nucleic acid molecule of claim 1, wherein the CEA protein is a human CEA protein or variant thereof or a rhesus monkey CEA protein or variant thereof.

Claim 3. (Canceled)

Claim 4. (Original) The nucleic acid molecule of claim 1, wherein the CEA protein is C-terminally truncated.

Claim 5. (Original) The nucleic acid molecule of claim 4, wherein the C-terminal truncation comprises amino acids 679 – 702 of SEQ ID NO:20.

Claim 6-7. (Canceled)

Claim 8. (Currently Amended) The nucleic acid molecule of claim 1 [[7,]] wherein the LT subunit B is truncated of its signal sequence.

Claim 9. (Canceled)

Claim 10. (Currently Amended) The nucleic acid molecule of claim 1, wherein the sequence of nucleotides comprises a sequence of nucleotides selected from the group consisting of SEQ ID NOS:7, 9, 11, 12, and 14, 21, 25, 49, 50, and 52.

Claim 11. (Previously Presented) The nucleic acid molecule of claim 10, wherein the sequence of nucleotides comprises a sequence of nucleotides as set forth in SEQ ID NO:9, SEQ ID NO:11, or SEQ ID NO:12.

Claim 12. (Previously Presented) The nucleic acid molecule of claim 1, wherein the sequence of nucleotides is as set forth in SEQ ID NO:12.

Claim 13. (Original) The nucleic acid molecule of claim 8, wherein the C-terminal end of the CEA protein is fused to the N-terminal end of LT subunit B.

Claim 14. (Previously Presented) A vector comprising the nucleic acid molecule of claim 13.

Claim 15. (Original) The vector of claim 14, wherein the vector is an adenovirus vector or a plasmid vector.

Claim 16. (Previously Presented) The vector of claim 15, wherein the vector is of an adenovirus type selected from the group consisting of: Ad5, Ad6 and Ad24.

Claims 17-19. (Canceled)

Claim 20. (Previously Presented) A host cell comprising the vector of claim 14.

Claim 21. (Original) A process for expressing a CEA fusion protein in a recombinant host cell, comprising:

(a) introducing a vector comprising the nucleic acid molecule of claim 1 into a suitable host cell; and,

(b) culturing the host cell under conditions which allow expression of said human CEA fusion protein.

Claims 22 -35. (Canceled)